FORM PTO-1390 (Modified) (REV 11-98) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER	U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR)
202103US2XPCT	09/764986

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/FR00/01308	16 MAY 2000	21 MAY 1999

TITLE OF INVENTION
UNIVERSAL GRAPH COMPILATION TOOL

APPLICANT(S) FOR DO/EO/US
Andre CHOVIN, et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ A copy of the International Search Report (PCT/ISA/210).
8. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
9. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
10. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
11. ☐ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 13 to 20 below concern document(s) or information included:

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ Certificate of Mailing by Express Mail
20. ☒ Other items or information:

Notice of Priority
PCT/IB/304
PCT/IB/308
Drawings (4 Sheets)
List of Related Cases
Cited References (3)
Form PTO 1449
Cited Pending Application (# 09/719,537)

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
09/764986	PCT/FR00/01308	202103US2XPCT

21. The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

		CALCULATIONS PTO USE ONLY
☐	Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2) paid to USPTO and International Search Report not prepared by the EPO or JPO **$1,000.00**	
☒	International preliminary examination fee (37 CFR 1.482) not paid to USPTO but Internation Search Report prepared by the EPO or JPO **$860.00**	
☐	International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$710.00**	
☐	International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$690.00**	
☐	International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) **$100.00**	

ENTER APPROPRIATE BASIC FEE AMOUNT = **$860.00**

Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (e)). **$0.00**

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	7 - 20 =	0	x $18.00	**$0.00**
Independent claims	1 - 3 =	0	x $80.00	**$0.00**
Multiple Dependent Claims **(check if applicable)**.			☐	**$0.00**

TOTAL OF ABOVE CALCULATIONS = **$860.00**

Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28) **(check if applicable)**. ☐ **$0.00**

SUBTOTAL = **$860.00**

Processing fee of **$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (f)). + **$0.00**

TOTAL NATIONAL FEE = **$860.00**

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) **(check if applicable).** ☐ **$0.00**

TOTAL FEES ENCLOSED = **$860.00**

Amount to be: refunded	$
charged	$

☒ A check in the amount of **$860.00** to cover the above fees is enclosed.

☐ Please charge my Deposit Account No. in the amount of to cover the above fees.
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **15-0030** A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Telephone: 703-413-3000
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Surinder Sachar
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Surinder Sachar
SIGNATURE

Marvin J. Spivak
NAME

24,913
REGISTRATION NUMBER

Jan 22 2001
DATE

202103US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :

ANDRE CHOVIN ET AL. :

SERIAL NO: NEW U.S. PCT APPLN. : ATTN: APPLICATION BRANCH
(Based on PCT/FR00/01308

FILED: HEREWITH :

FOR: UNIVERSAL GRAPH COMPILATION TOOL

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Prior to a first examination on the merits, please amend the above-identified application as follows:

IN THE SPECIFICATION

Page 1, before line 1, insert --TITLE OF THE INVENTION--;

between lines 1 and 2, insert:

--BACKGROUND OF THE INVENTION

Field of the Invention:--;

between lines 3 and 4, insert --Discussion of the Background:--.

Page 2, between lines 7 and 8, insert:

--SUMMARY OF THE INVENTION--;

between lines 34 and 35, insert:

--BRIEF DESCRIPTION OF THE DRAWINGS--.

Page 3, between lines 9 and 10, insert:

--DESCRIPTION OF THE PREFERRED EMBODIMENTS--.

IN THE CLAIMS

Please amend the claims as follows:

Claim 1, line 2, delete "(23)";

line 3, delete "(35)";

line 6, delete "(24)";

line 7, delete "(23)";

line 8, delete "(29)";

line 9, delete "(32)";

line 10, delete "(34)";

line 11, delete "(35)";

line 12, delete "(24)", same line, delete "(25)".

Claim 2, line 4, delete "(33-34)".

Claim 3, lines 1-2, change "one of the preceding claims" to --claim 1--;

line 2, delete "(34')";

line 4, delete "(35')";

line 5, delete "(37)".

Claim 4, lines 1-2, change "one of the preceding claims" to --claim 1--;

line 3, delete "(26)";

line 4, delete "(27)".

Please add new Claim 5-7 as follows:

--5. The system as claimed in claim 2, characterized in that the memories in which the commands must be written are fixed on the corresponding components and in that these commands are remote loaded.

6. The system as claimed in claim 2, characterized in that the man-machine interface comprises a topological checker and a syntactic and semantic checker.

7. The system as claimed in claim 3, characterized in that the man-machine interface comprises a topological checker and a syntactic and semantic checker.--

IN THE ABSTRACT

Please delete the original Abstract sheet page 10 in its entirety and insert therefor:

--ABSTRACT OF THE DISCLOSURE

A universal graph compilation tool. The tool is implemented on a microcomputer, and includes a spreadsheet associated with a library of graphical symbols and a compiler. Compiled code is transmitted via the operating system of the microcomputer to its output port to which are connected programmable memories of the components which must be controlled by the commands generated on the basis of graphs produced on the spreadsheet.--

REMARKS

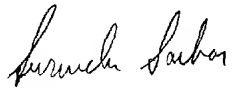
Favorable consideration of this application, as presently amended, is respectfully requested.

The present preliminary amendment is submitted to place the above-identified application in more proper format under United States practice. By the present preliminary amendment the specification has been amended to include suggested headings. The claims have been amended to no longer recite any reference numerals or multiple dependencies. The subject matter of the cancelled multiple dependencies is also now set forth in new dependent Claims 5-7. A new Abstract believed to be in more proper format under United States practice is also submitted herein.

The present application is believed to be in condition for a full and thorough examination on the merits. An early and favorable consideration of the present application is hereby respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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UNIVERSAL GRAPH COMPILATION TOOL

The present invention relates to a universal graph compilation tool.

Increasingly more often, the design and programming of software products are represented directly by a presentation in the form of a graph connecting functions. For example, the "SAO" language used by the European aeronautical constructors makes it possible to represent any control algorithm as an oriented system of block diagrams. The IEC 1131-3 standard defines three graphic languages of the same nature: "SFC" ("Sequential Flow Chart"), "LD" ("Ladder Diagram") and "FBD" ("Function Block Diagram") which make it possible to represent any automation program graphically.

All of these known graphical representations must be acquired by data processing means, analyzed from the syntactic and semantic points of view, translated into a computer language (C, ADA, Assembler, Basic, Fortran,...) which itself is compiled and edited in order to provide a binary program which can be executed by a processor or directly translated into a binary program which can be executed directly in a processor. The execution of this binary program makes it possible to implement the algorithms described in the initial graphical representation. The tools which ensure the entry, analysis and translation of the graphical representations will be referred to hereafter as graph compilers.

The known graph compilers however have the following disadvantages:

- the entry of graphs necessitates the programming of a graphical man-machine interface which is often expensive, complex, difficult to transfer from one computer system to another and sometimes not very ergonomic as they require very precise fingering in order to interconnect the various components of the graph.

- the syntactic and semantic analysis of the graphs is individual to each type of graphical representation and to each associated semantics,
- the generation or translation of the graphical representations into computer language is very specific to the language and optimizations of generation.

The present invention relates to a graph compiler which is universal, can be parameterized, whose processes of analysis, generation and optimization are independent of the syntax of the initial graph, of the semantics and of the final language into which the graph is translated. Furthermore, this compiler must have a graph entry phase which is simple and fast.

The graph compiler according to the invention comprises a man-machine interface implemented on a microcomputer where it is connected to a compiler which is itself connected via the operating system of the microcomputer to means of writing in at least one memory of at least one component on which the command corresponding to the graph must be used, the man-machine interface comprising a spreadsheet associated with a library of two types of graphical symbols each one corresponding, with regard to the first type, to an elementary component function and, with regard to the second type, to a link relating to the symbols of the first type, the symbols selected in the library being placed in the spreadsheet at the rate of one symbol per cell or per group of cells and assembled in such a way as to constitute a graph.

Advantageously, the graphical symbols are each contained in one or more squares, and their inputs and outputs all end at the centers of the corresponding sides of these squares.

The present invention will be better understood on reading the detailed description of one embodiment, taken by way of non-limitating example and illustrated by the accompanying drawings in which:

- Figure 1 is an example component able to be used by the invention and consisting of three elementary squares
- Figure 2 is a set of examples of link symbols such as used by the invention,
- Figure 3 is a simplified example of a graph according to the invention, and
- Figure 4 is a block diagram of a graph compiler according to the invention.

The components to which the invention applies are, in particular, automatic devices.

In this case the expression "automatic devices" refers to "intelligent" automation devices, that is to say devices at least provided with means allowing them to communicate with a microcomputer via a communications line, at least in one direction, in order to receive from it commands and/or data and/or in order to transmit to it data (such as measured physical values if it is a matter of sensors, or positions if it is a matter of moving components, or states if it is a matter of switches, for example). Advantageously, these components comprise a memory in which can be stored data relating to their characteristics or their operation and generated by the compiler of the invention. Examples of such components are actuators, sensors, servo-valves, relays, programmable automatic devices,... or even remote input/output devices, that is to say assemblies separate from the microcomputer and the automation components, comprising at least an analog/digital converter and/or a digital/analog converter, and a multiplexer and/or a demultiplexer, or even programmable automatic devices which comprise the same functions as the remote input/output assemblies whilst additionally being able to execute automation sequences by themselves.

Figure 1 shows an example component 1 (a counter in this case) produced from three elementary squares referenced 2 to 4, aligned vertically, in order to obtain a graphic similar to the one generally used for

graphs. In order to be able to establish links easily between this component and other components, the invention makes provision for all the inputs and outputs (a maximum of four in total) of the components to be located at the centers of the sides of the elementary squares which form them, as is the case in the example of Figure 1.

Figure 2 shows several examples of connection portions, each one disposed in an elementary square. In the same way as for the components, the ends of the connection portions end each time in the centers of the corresponding sides of the elementary squares.

The first line of Figure 2 shows straight connections, namely a horizontal connection portion and a vertical connection portion.

The second line of Figure 2 shows four connections, each one facing a different corner of the elementary square.

The third line of Figure 2 shows four branch connections ("T" connections) in four different orientations.

Finally, the fourth line shows a perpendicular intersection of two conductor portions in mutual contact and another perpendicular intersection but without contact between the conductors.

Figure 3 shows a section 5 of a spreadsheet such as seen on the screen of a microcomputer. In this section 5 there has been shown a grid 6 in which each elementary square (or rectangle) corresponds to a cell of the spreadsheet. In this grid, there have been disposed the components of a portion of circuit 7 whose graphics conform with the standard used in the technical field relating to the circuit in question. These components are each constituted by one or more elementary symbols, each of these symbols being contained in an elementary square, as shown in Figures 1 and 2. These symbols are stored in a library (see Figure 4) from which they are extracted as they are placed on the grid 6, this being done in a known way.

The portion of circuit 7 comprises, for the example shown, from left to right in the drawing, a first symbol 8 of a relay 9 ending at a potential bar 10. This relay 9 is, for example, numbered "0001", because it is assumed that the complete circuit comprises a large number of such relays. To the right of the symbol 8 there are disposed, on the same line of the grid, two horizontal junction symbols 11, 12 ending at the R input of a flip-flop 13 of the RS type. This flip-flop 13 comprises two elementary squares 14, 15, the square 15 (S input) being disposed under the square 14 (R input). The S input of the flip-flop 13 is connected to the output of a device, referenced "K0001" forcing this input to a defined value (logic "0" or "1"), this device consisting of a single elementary square 16, disposed just to the left of the square 15. The output of the flip-flop 13, located opposite its R input is connected by a horizontal link, composed of three symbols identical to those of the square 11 and 12 and occupying the squares 17, 18 and 19. This link ends at a component 20 (which is for example a voltage source referenced "O0002"), shown in a square 21, inside of which it is connected to a potential bar 22.

The example shown in Figure 3 of course has only a didactic purpose and is only partial. It will be noted that the elements of the graphics of Figure 3 follow the same rules of displacement as all of the elements (in particular graphical ones) which are generally placed in the cells of a spreadsheet, that is to say that they can be translated horizontally and vertically, but cannot in any case pivot.

Figure 4 shows the functional block diagram of the graph compiler tool of the invention. This compiler comprises, in a microcomputer 23, a spreadsheet 24. This spreadsheet is connected to a library 25 in which are stored all the symbols necessary for the production of all the graphs which are required to be plotted. Not only are the graphical symbols stored there, but also the corresponding generated codes with sections which

can be parameterized (codes which make it possible to carry out all of the processings which can be envisaged on the basis of the graphs). These symbols are allocated with references which appear, for example, in a window of the screen of the microcomputer as soon as the user wishes to use symbols and clicks on the icon of the library. He scrolls the list of these references and, as soon as he finds the one sought, he clicks on it and the corresponding symbol is displayed in the window of the spreadsheet. All that remains is to move the symbol thus displayed (for example by means of a mouse, using the well known "drag-and-drop" technique) to the desired cell of the spreadsheet.

When the graph of the circuit constituted in this way (or at least a portion of this circuit) is completed, a topological network checker 26 checks that the topological rules of the graphs have been complied with by the graph displayed in the spreadsheet 24. This first check of consistency of the graph entered by the user makes it possible to indicate to him for correction:

- any elementary square occupied by a component or a connection which is not part of the dictionary of components and connections corresponding to the type of graph entered;

- any elementary square in which two or more components or connection portions are superimposed;

- any connection of an elementary square which would not be aligned with a connection of the adjacent elementary square.

This check and this representation are universal for any graph or network drawn in a plane. For a network or graph drawn in space, this representation and all the subsequent processings are extensible to a construction of components using elementary cubes or any elementary regular volume making it possible to fill the entire space by adjacency (for example trihedrals with equilateral faces,...). The connections

are then placed at the centers of the faces of the volume.

After this first check, a checker 27 checks, using codes coming from the library 25 and corresponding to the various components of the graph produced, that the syntactic and semantic rules of graphs have been complied with by the graph displayed in the spreadsheet 24. These codes relate to:

- specific parameters of the components, for example their position and their name in the entered graph, the values of certain constants (for example, the duration of a timing delay),...
- the list, which can be parameterized, of computer language instructions to be generated during the ultimate translation phase. These instructions have alphanumeric strings modifiable according to the said parameters and information passing though the points of connection of the component.
- the semantic characterization of the data of each connection point of the component: input or output for an oriented graph, or neutral for a non-oriented graph; type of information passing though the connection (Boolean, digital with absolute precision, digital with relative precision, character string, table, automatic device status,...)

When these checks are completed and possible errors have been corrected, a generator 28 generates an optimized code. Steps 26 to 28 constitute the equivalent of a known proprietary programming tool. They are implemented by means of programs which are easy to produce by those skilled in the art on reading this description.

The code, which is optimized in 28, is sent to a compiler and link editor 29. The compiled code is loaded at 30 in order to produce an executable control program. According to a variant, as represented by an arrow 31 drawn in dashed line, the code optimized in 28 is directly loaded at 30. The control program is

transmitted by means of the operating system 32 of the microcomputer 23 to its output port 33 (serial, parallel, bus...).

It is possible to connect to the port 33 of the microcomputer 23 a programmable memory 34 (for example of the EEPROM type) fixed on an appropriate support, and to transmit to it the corresponding executable program available at 30.

When the programming of the memory 34 is completed, the latter is removed from its support and inserted in the corresponding automation component (35A) forming part of the assembly of components to be programmed (35). This operation is repeated for the programmable memories of all the other automation components. The microcomputer 23 can of course advantageously control and supervise the components of the assembly 35, as indicated by the arrows 36 drawn in dashed line.

According to a variant of the invention, shown in dashed line, the programmable memories (34') are fixed to the automation components (35') which are connected to the port 33 by a link 37 (which can be similar to the link 36), and the programming of these memories is carried out via this link 37.

CLAIMS

1. A universal graph compilation system comprising a microcomputer (23) connected to at least one component (35) on which must be implemented the command corresponding to a graph, characterized in that in order to simplify the entry of the graphs, this system comprises a man-machine interface (24) implemented on the microcomputer (23) where it is connected to a compiler (29) which is itself connected via the operating system of the microcomputer (32) to means of writing in at least one memory (34) of the component (35), the man-machine interface comprising a spreadsheet (24) associated with a library (25) of two types of graphical symbols, each one corresponding, with regard to the first type, to an elementary component function and, with regard to the second type, to a link relating to the symbols of the first type, the symbols selected in the library being placed in the spreadsheet at a rate of one symbol per cell or per group of cells and assembled in such a way as to constitute a graph, each of the graphical symbols being represented in a group of adjacent elementary squares, and their connections ending at the centers of the corresponding sides of each elementary square.

2. The system as claimed in claim 1, characterized in that the memories in which the components are written are connected directly to the microcomputer (33-34).

3. The system as claimed in one of the preceding claims, characterized in that the memories (34') in which the commands must be written are fixed on the corresponding components (35') and in that these commands are remote loaded (37).

4. The system as claimed in one of the preceding claims, characterized in that the man-machine interface comprises a topological checker (26) and a syntactic and semantic checker (27).

ABSTRACT

UNIVERSAL GRAPH COMPILATION TOOL

The tool of the invention, implemented on a microcomputer (23), essentially comprises a spreadsheet (24) associated with a library of graphical symbols (25) and a compiler (29). The compiled code is transmitted via the operating system (32) of the microcomputer to its output port (33) to which are connected the programmable memories (34) of the components (35) which must be controlled by the commands generated on the basis of graphs produced on the spreadsheet.

Figure 4

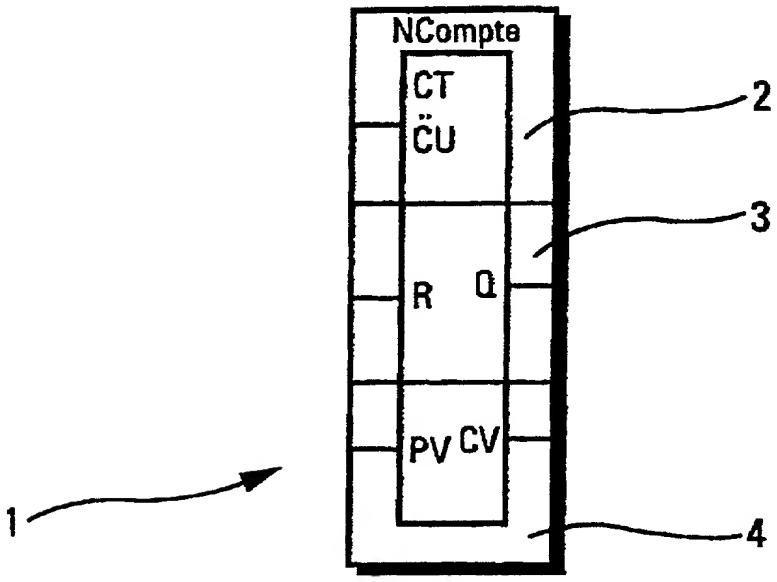

Fig. 1

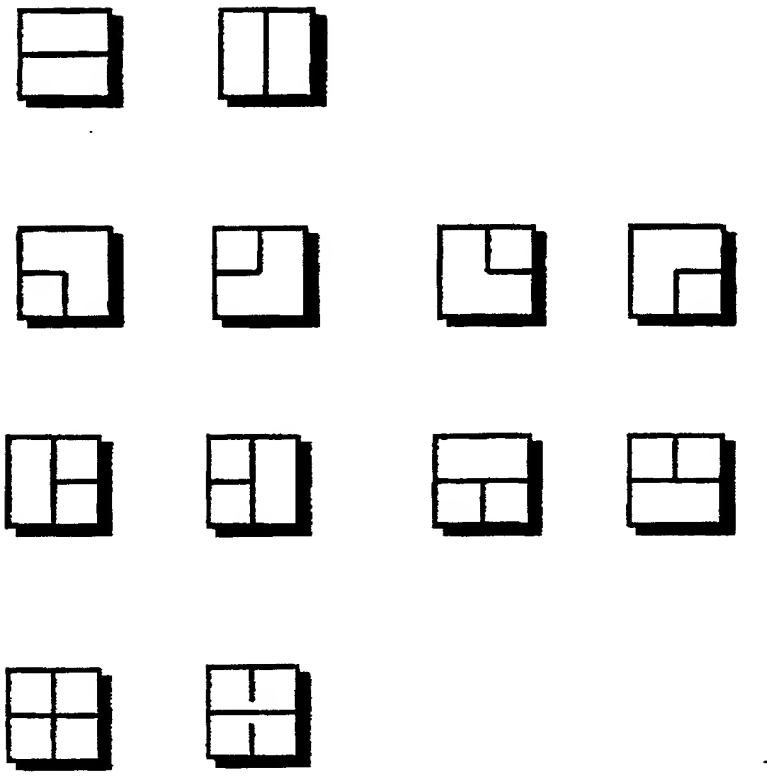

Fig. 2

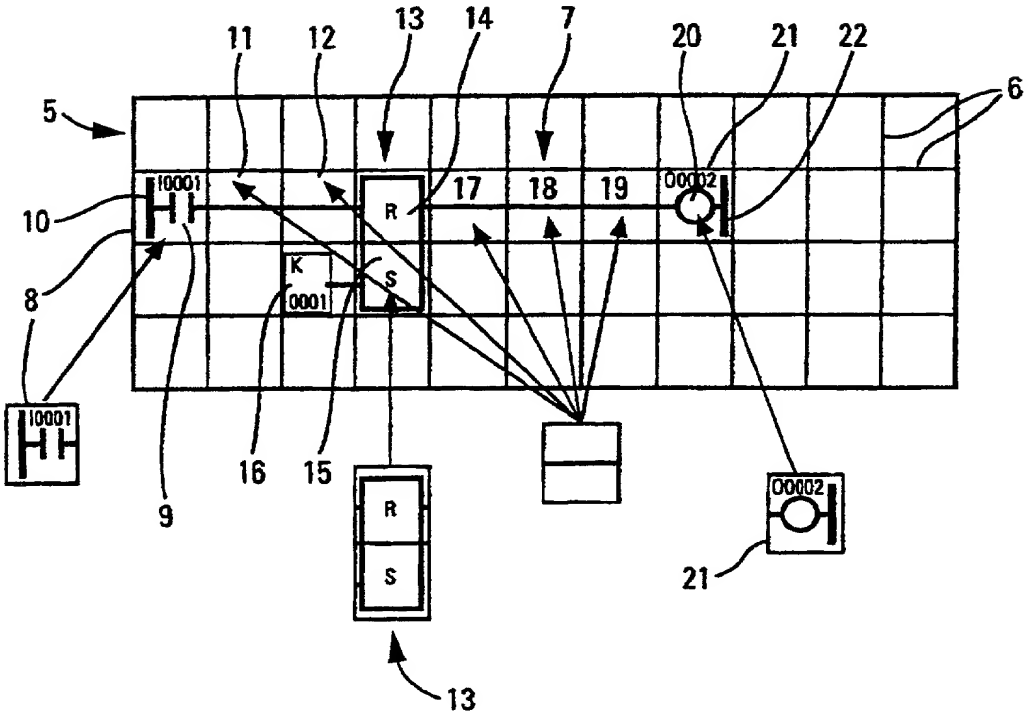

Fig. 3

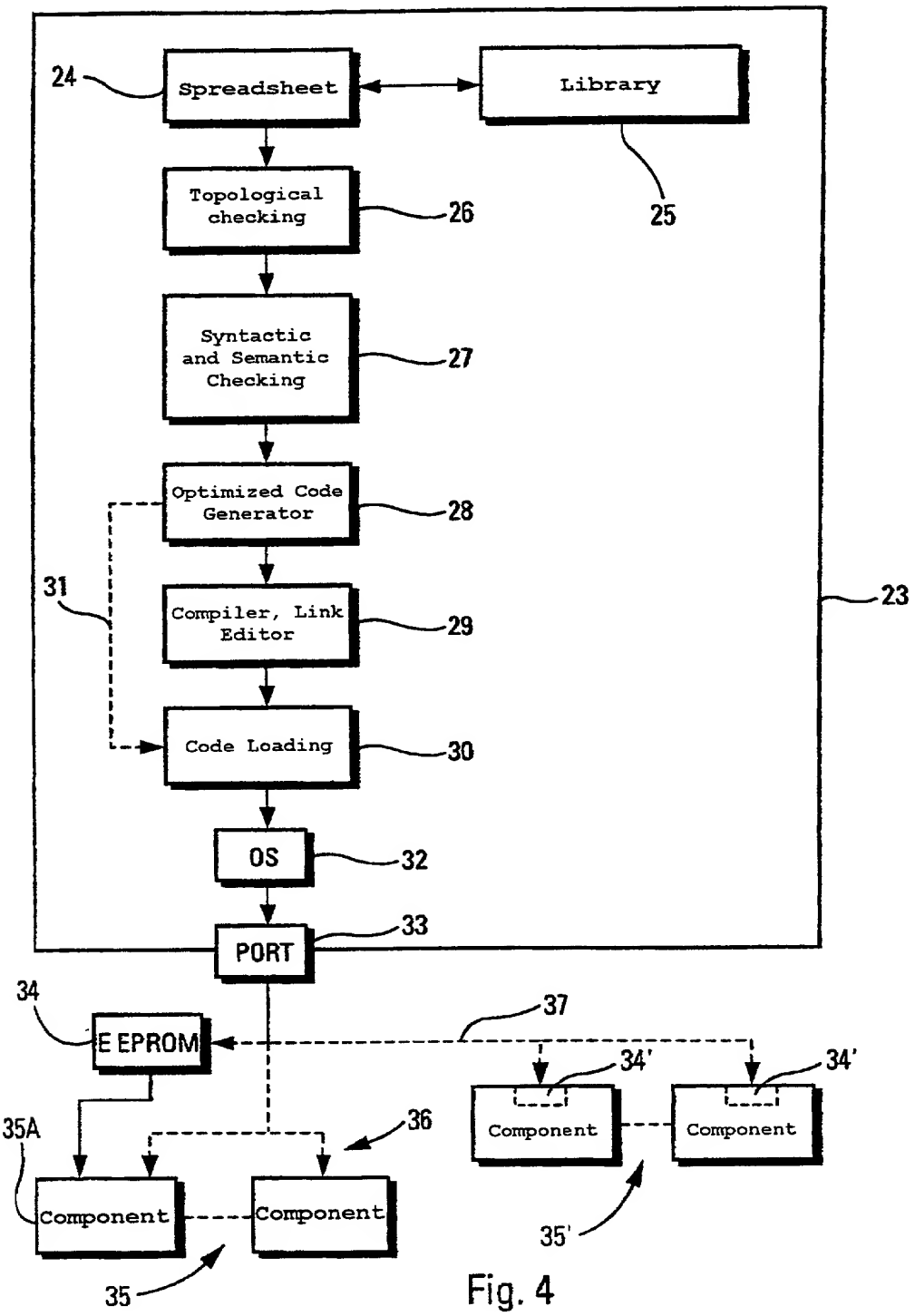
24
Spreadsheet
Library
25
Topological checking
26
Syntactic and Semantic Checking
27
Optimized Code Generator
28
31
Compiler, Link Editor
29
23
Code Loading
30
OS
32
PORT
33
34
E EPROM
37
34'
34'
Component
Component
35A
36
Component
Component
35'
35

Fig. 4

DOCKET NO.: 202103US2XPCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Andre CHOVIN, et al.

SERIAL NO.: NEW U.S. PCT APPLICATION

FILED: HEREWITH

INTERNATIONAL APPLICATION NO.: PCT/FR00/01308

INTERNATIONAL FILING DATE: 16 MAY 2000

FOR: UNIVERSAL GRAPH COMPILATION TOOL

REQUEST FOR PRIORITY UNDER 35 U.S.C. 119 AND THE INTERNATIONAL CONVENTION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In the matter of the above-identified application for patent, notice is hereby given that the applicant claims as priority:

COUNTRY	APPLICATION NO.	DAY/MONTH/YEAR
FRANCE	99/06511	21 MAY 1999

A certified copy of the corresponding Convention application(s) was submitted to the International Bureau in PCT Application No. **PCT/FR00/01308.** Receipt of the certified copy(s) by the International Bureau in a timely manner under PCT Rule 17.1(a) has been acknowledged as evidenced by the attached PCT/IB/304.

Respectfully submitted,
OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Marvin J. Spivak
Attorney of Record
Registration No. 24,913
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(OSMMN 1/97)

French Language Declaration

POUVOIRS: En tant que l'inventeur cité, je désigne par la présente l'(les) avocat(s) et/ou agent(s) suivant(s) pour qu'ils poursuive(nt) la procédure de cette demande de brevet et traite(nt) toute affaire s'y rapportant avec l'Office des brevets et des marquees. *(mentionner le nom et le numéro d'enregistrement).*

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: *(list name and registration number)*

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Nom complete de l'unique ou premier inventeur	Full name of sole or first inventor André CHOVIN January 3, 2001
Signature de l'inventeur Date	Inventor's signature Date André Chovin
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Adresse Postale	Post Office Address Les Moutiers
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Nom complete du second co-inventeur, le cas echeant	Full name of ~~second joint~~ inventor, if any Alain CHATENAY January 3, 2001
Signature de l'inventeur Date	Second inventor's signature Date Alain Chatenay
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(Fournier les mêmes renseignements et la signature de tout co-inventeur supplémentaire)

(Supply similar information and signature for third and subsequent joint inventors.)

8/97

Declaration and Power of Attorney for Patent Application
Déclaration et Pouvoirs pour Demande de Brevet

French Language Declaration

En tant l'inventeur nommé ci-après, je déclare par le présent acte que·

As a below named inventor, I hereby declare that:

Mon domicile, mon adresse postale et ma nationalité sont ceux figurant ci-dessous à côté de mon nom

My residence, post office address and citizenship are as stated next to my name

Je crois être le premier inventeur original et unique (si un seul nom est mentionné ci-dessous), ou l'un des premiers co-inventeurs originaux (si plusieurs noms sont mentionnés ci-dessous) de l'objet revendiqué, pour lequel une demande de brevet a été déposée concernant l'invention intitulée

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

UNIVERSAL GRAPH COMPILATION TOOL

et dont la description est fournie ci-joint à moins

the specification of which:

☐ ci-joint

☐ is attached hereto

☐ a été déposée le _____

☒ was filed on May 16, 2000

sous le numéro de demande des Etats-Unis ou le numéro de demande international PCT

as United States Application Number or PCT International Application Number

_____ et modifiée le

PCT/FR00/01308 and was amended on

_____ (le cas échéant)

_____ (if applicable)

Je déclare par le présent acte avoir passé en revue et compris le contenu de la description ci-dessus, revendications comprises, telles que modifiées par toute modification dont il aura été fait référence ci-dessus.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above

Je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1 56 du Code fédéral des réglementations

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

French Language Declaration

Je revendique par le présent acte avoir la priorité étrangère, en vertu du Titre 35, § 119(a)-(d) ou § 365(b) du Code des Etats-Unis, sur toute demande étrangère de brevet ou certificat d'inventeur ou, en vertu du Titre 35, § 365(a) du même Code, sur toute demande internationale PCT désignant au moins un pays autre que les Etats-Unis et figurant ci-dessous et, en cochant la case, j'ai aussi indiqué ci-dessous toute demande étrangère de brevet, tout certificat d'inventeur ou toute demande internationale PCT ayant une date de dépôt précédant celle de la demande à propos de laquelle une priorité est revendiquée

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)
Demande(s) de brevet antérieure(s) dans un autre pays

(Number) (Numéro)	(Country) (Pays)	(Day/Month/Year Filed) (Jour/Mois/Anné de dépôt)	Priority claimed Droit de priorité revendiqué: Yes Oui	No Non
99 06511	FRANCE	21 MAY 1999	☒	☐
			☐	☐

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 119(e) du Code des Etats-Unis, de toute demande de brevet provisoire effectuée aux Etats-Unis et figurant ci-dessous

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below

(Application No.) (Nº de demande)	(Filing Date) (Date de dépôt)	(Application No.) (Nº de demande)	(Filing Date) (Date de dépôt)

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 120 du Code des Etats-Unis, de toute demande de brevet effectuée aux Etats-Unis, ou en vertu du Titre 35, § 365(c) du même Code, de toute demande internationale PCT désignant les Etats-Unis et figurant ci-dessous et, dans la mesure où l'objet de chacune des revendications de cette demande de brevet n'est pas divulgué dans la demande antérieure américaine ou internationale PCT, en vertu des dispositions du premier paragraphe du Titre 35, § 112 du Code des Etats-Unis, je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1 56 du Code fédéral des réglementations, dont j'ai pu disposer entre la date de dépôt de la demande antérieure et la date de dépôt de la demande nationale ou internationale PCT de la présente demande

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1 56 which became available between the filing date of the prior application and the national or PCT International filing date of this application

(Application No.) (Nº de demande)	(Filing Date) (Date de dépôt)	(Status) (patented, pending, abandoned) (Statut) (breveté, en cours d'examen, abandonné)
PCT/FR00/01308	MAY 16, 2000	

Je déclare par le présent acte que toute déclaration ci-incluse est, à ma connaissance, véridique et que toute déclaration formulée à partir de renseignements ou de suppositions est tenue pour véridique, et de plus, que toutes ces déclarations ont été formulées en sachant que toute fausse déclaration volontaire ou son équivalent est passible d'une amende ou d' une incarcération, ou des deux, en vertu de la Section 1001 du Titre 18 du Code des Etats-Unis, et que de telles déclarations volontairement fausses risquent de compromettre la validité de la demande de brevet ou du brevet délivré à partir de celle-ci

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon